Chapter 11: Islamorada Village of Islands

11.1 Overview of Islamorada

Early settlers came to the islands from the Bahamas and New England. These people raised and shipped thousands of pineapples to northern markets. One of these ships was named the "Island Home" which was built on Plantation Key by Johnny Brush Pinder. It was from this schooner that the Village took its name: "Isla Morada," which means Island Home in the Spanish language.

Islamorada, Village of Islands (the "Village"), located in the Upper Florida Keys of Monroe County, was incorporated as a municipality on December 31, 1997. House Bill No. 1265 created the Village and also gave the Mayor authority to sign and execute documents. Islamorada is known as the "Sport Fishing Capitol of the World."

Geography

The Village is located in the 822-island archipelago known as the Florida Keys, surrounded by the Atlantic Ocean and the estuarine waters of Florida Bay. The adjacent marine environments support rich biological communities possessing extensive conservation, recreational, commercial, ecological, historical, research, educational, and aesthetic values that give this area special national significance.

As a part of the Florida Keys chain of islands, the Village's corporate boundaries extend from Mile Marker 90.939 to Mile Marker 72.658 (along U.S. Highway 1), and consists of four islands: Plantation Key, Windley Key, Upper Matecumbe Key and Lower Matecumbe Key. The Village is approximately 18 linear miles long and no more than two or three blocks wide, encompassing 11,748 acres. The highest elevation is 18 feet above mean sea lever at Lignum Vitae Key.

Population

Islamorada has a permanent resident population of 6,846 (2000 Census). Tourism sometimes doubles the population in the area. Current population projects indicate the permanent population may grow to 8,200 by 2010.

The Village's Comprehensive Plan mandates that its government manage the rate of development and population growth to promote small-town ambiance, improve quality of life for residents, enhance and protect natural resources and environmental quality unique to the Florida Keys, comply with adopted level of service standards for public facilities, effectively time public infrastructure and services according to the availability of public funds and support safe and timely evacuation prior to a hurricane.

Land Use & Economy

A significant portion of the waters adjacent to the islands have been designated as Outstanding Florida Waters, and includes the 2,800-nautical square mile Florida Keys National Marine Sanctuary, the second largest in the United States. The extraordinary natural resources support the two primary industries of the Village—tourism and commercial fishing. The citizens of the Village depend upon the ocean for many basic needs. The lack of affordable housing sanctions the use of marine vessels for housing for many residents. Many residents earn their living through the fishing and diving industries and the tropical island atmosphere generates tourism from around the world. As a result, the health and welfare of the community are largely dependent upon the health of the surrounding environment. Therefore, the Village has a responsibility to protect and preserve its unique natural resources, which will in turn protect and foster its community character, maintaining the health safety and welfare of its citizenry.

Much of the Village is developed with a mix of single family residences, multi-family dwellings, tourist lodging (hotels, motels, inns), commercial retail, professional offices, marine uses, tourist-oriented recreational uses, and government uses.
The Village joined the National Flood Insurance Program in October 1996 and administers a floodplain management ordinance that meets or exceeds the minimum federal requirements. Four sites are listed by the Historic Florida Keys Foundation, Inc., or are listed on the National Register of Historic Places: Windley Key Fossil Reef State Geological Site; Hurricane Monument (MM 81.5); Indian Key; and Lignum Vitae Key.

11.2 Village Organization and Agencies

Islamorada, Village of Islands is a "city manager" form of municipal government. Appointed by the Village Council, the Village Manager (also Village Attorney) is responsible for the management of the Village, and reports directly to the Village Council. The governing body of the Village is the Village Council of Islamorada, Village of Islands. The Village Council is composed of five members, including the Mayor who is appointed by the Village Council body annually. Immediately after the initial election, the first Village Council went to work quickly and composed the following Vision:

To Protect the residents' right to quiet enjoyment of life
To Plan for enhancing the Village character
To Preserve our community resources . . . people, natural resources, pride and
To Provide basic service to support our quality of life.

The Village is a rural municipality, with 60 employees delivering basic services of government including:

- Fire protection, emergency management and emergency medical services;
- Planning and zoning;
- Building and Code Compliance (permitting, inspection and code enforcement);
- Public works;
- Waste collection;
- Parks and conservation lands; and
- Recreation services

Police enforcement services are provided contractually by the Monroe County Sheriff's Office. Solid waste services are also delivered contractually resulting from competitive bids and contract negotiations.

The Village's primary departments that have responsibilities that have bearing on how natural and manmade hazards are recognized and addressed and with active roles in mitigation and protection of public facilities are the fire, building, planning and public works departments.

Table 11-1. Islamorada: Permits Issued (2003, 2004).

	Calendar Year 2003	Calendar Year 2004
New single-family, detached	31	28
New single-family, attached	0	0
Multi-family (2 or more)	2	1
Non-residential (all types)	10	15
Residential (additions, alterations, repairs)	209	188
Non-residential (additions, alterations, repairs)	41	10
Demolition	36	41
Relocation	0	0
Mobile home (permanent/temporary)	1	0
Total Permits Issued	330	283
Total Inspections Conducted	515	533

11.3 Hazards and Risk in Islamorada

In the recent past, the Florida Keys has suffered from natural disasters of varying degrees. In September 25, 1998, Hurricane Georges inundated the Keys. Following this, on

November 4-5, 1998, the Florida Keys suffered another blow from Tropical Storm Mitch. The tropical storm was more severe than originally anticipated and spawned several tornadoes. The Upper Keys, including the Village sustained serious amounts of damage.

Historic Storms

The landfall location for the strongest hurricane recorded, the "Labor Day Storm" of 1935, made landfall at Islamorada. It is remains one of the most intense category 5 and deadliest hurricanes. Winds were estimated at 160 mph with gusts from 190-210 mph. Tide levels ranged from 14 feet above MSL in Key Largo to 18 feet above MSL at Lower Matecumbe Key. Despite its ferocity, it was a small storm causing water levels at Key West to rise only two feet above MSL and sustained winds of less than 40 mph.

Florida has been devastated by several flood-related events over the years, caused by heavy rainfall, tropical depressions and hurricanes. Between 1992 and 1994, the State of Florida received six Presidential Disaster Declarations for natural disaster events, four of which were flood related. Each year, there is a potential that Florida will suffer from tropical storms, severe rain events or hurricanes.
Other significant storms:

- Hurricane Donna (August 29-September 19, 1960). A Category 4 hurricane, this storm is listed among the most intense in U.S. history. It curved northwestward over the Middle Keys before turning north towards the mainland at Naples and Fort Myers. Wind speeds of 128 mph and central pressure of 28.44 inches were measures. Tide levels ranged from 13.5 feet above MSL ocean side at Islamorada (MM 80-83), +10 feet MSL ocean side Upper Matecumbe Key (MM 83-84) and 9-10 feet MSL Bay side.
- Hurricane Betsy (August 26-September 12, 1965). A Category 3 hurricane, Betsy passed over Marathon moving westward into the Gulf of Mexico. At Tavernier, central pressure was recorded at 18.12 inches and wind speeds were estimated at 120 mph. Flood levels were measures at 9 feet MSL in Key Largo.
- Hurricane Georges (September 25, 1998). Near Islamorada at Mile-Marker 76.8, water rose to 4.5 feet above MSL and 6.1 feet at Mile-Marker 77.8. Near Mile-Marker 84, the highway was affected by flooding, downed trees and damage to road signs. Some beach erosion occurred.

Effect of Recent Hurricane Disasters

Damage from Hurricane Georges is representative of Islamorada's exposure:

- Debris Removal: $2.5 million
- Emergency Labor and Supplies: $12,000

- Manning of EOC and Search and Rescue: $8,000
- Waste Water Treatment System Repairs: $10,000
- Storm Water Systems Repair: $10,000

Private property damage totaled approximately $5 million due to the effects of high winds, driven rain, and flooding. The following is an account of damage in Islamorada as reported in a special edition of the Miami Herald, September 27, 1998:

- Lower Matecumbe Key – Storm surge cut across U.S. 1 highway covering it with sand, chunks of concrete, seaweed, and wood pilings. Bulldozers have cleared a pathway for emergency vehicles. Water rose more than a foot high in some homes.
- Windley Key – Holiday Isle Marina undamaged, but oceanside docks and tiki huts were mostly destroyed. Rooftop air conditioning unit at the Dive and Swim Center was damaged.
- Islamorada – Shoreline Motel lost 50-foot section of aluminum facing from the roof. An oceanside cottage at Cheeca Lodge (MM 82) lost some roofing. At Island Christian School, a large ficus toppled and crushed a chain link fence.
- Plantation Key – Many mobile homes flooded at Ocean San Pedro Trailer Park.

Despite being only a category 2 hurricane, all businesses were closed or severely restricted from operating due to structural damage and power outages. Businesses related to tourism and fishing and marine activities were most affected by Georges.

Hurricane Flooding as Predicted by SLOSH Modeling

The National Hurricane Center's surge model, called SLOSH (Sea, Lake, and Overland Surges from Hurricanes), estimates surges associated with different characteristics of tropical cyclones (track, forward speed, wind speed, etc.). The results can be combined with topographic mapping to delineate inland areas subject to flooding (with a margin of error of +/- 20%). Table 11-2 shows the storm surge predications for four locations in Islamorada (Islamorada MM82, Islamorada MM 83.5, Plantation Key MM 88.5, and Plantation Key MM 90).

Table 11-2. SLOSH Maximum Predicted Water Depths above MSL

Islamorada Mile-Marker 82 Ocean Side						Islamorada Mile-Marker 82 Bay Side					
Track	Storm Categories					Track	Storm Categories				
Direction	1	2	3	4	5	Direction	1	2	3	4	5
WSW	4	5	7	8	9	WSW	4	5	7	8	9
W	4	6	7	9	10	W	4	5	7	8	9
WNW	4	6	7	9	10	WNW	4	5	6	7	8
WN	4	6	7	9	10	NW	3	4	6	7	7
NNW	4	5	7	8	9	NNW	3	4	6	7	8
N	4	5	7	8	9	N	3	4	6	7	8
NNE	4	5	6	8	9	NNE	3	5	6	7	8
NE	4	5	6	7	8	NE	4	5	7	8	9
ENE	3	5	6	7	8	ENE	4	7	9	10	11
E	3	4	6	7	8	E	5	8	10	10	11

Plantation Key Mile-Marker 88.5 Bay Side						Plantation Key Mile-Marker 90 Ocean Side					
Track	Storm Categories					Track	Storm Categories				
Direction	1	2	3	4	5	Direction	1	2	3	4	5
WSW	4	6	8	9	10	WSW	4	5	7	8	10
W	4	5	7	8	9	W	4	6	8	9	11
WNW	3	5	7	7	8	WNW	4	6	8	9	11
WN	3	5	6	7	8	NW	3	4	6	7	7
NNW	3	5	6	7	9	NNW	4	6	7	9	10
N	3	5	7	8	9	N	4	5	7	8	9
NNE	3	5	7	8	9	NNE	4	5	7	8	10
NE	4	6	8	9	1-	NE	4	5	6	8	9
ENE	5	8	10	12	13	ENE	4	5	6	8	9
E	6	10	11	12	13	E	3	5	6	7	8

NFIP Floodplain Mapping

The National Flood Insurance Program (NFIP) prepared a Flood Insurance Rate Map for the Village of Islamorada (current effective map is Monroe County's Flood Insurance Rate Map dated February, 2002). The FIRM delineates areas that have been determined to be subject to flooding by the "base flood," the flood that has a 1-percent-annual chance of flooding in any given year (commonly called the 100-year flood). The majority of land in Islamorada is subject to flooding. Areas noted as VE Zone, subject to high velocity wave action, are shown with flood levels ranging from 10 to 14 feet above MSL. Areas noted as AE Zone, where waves are expected to be less than 3-feet in height, flood levels are predicted to range from 6 to 10 feet above MSL.

NFIP Flood Insurance Policies in Marathon 7,266

Claims paid since 1978: 8*

http://www.fema.gov/nfip/pcstat.shtm
(as of December 31, 2004)

*records prior to incorporation included in claims for Monroe County

The area along U.S. Route 1 and commercial properties that front on the highway, plus Plantation Key, Windley Key, and Upper Matecumbe Key, have some areas with ground elevations higher than the predicted 100-year flood elevation. Sections around Coral Shores High School are also shown as outside of the mapped floodplain.

NFIP Repetitive Loss Properties

Data provided by the Florida Department of Community Affairs identifies properties that are or have been insured by the National Flood Insurance Program and that have received two or more claims of at least $1,000. Within unincorporated Islamorada there are 3 repetitive loss properties. The cumulative payments (claims paid on building damage and on contents damage) range from just over $3,000 to more than $75,000.

Severe Storms, Tornadoes, Water Spouts and High Winds (Other than Hurricane)

Islamorada, like the rest of the Keys, has low-lying terrain. Section 6.2 characterizes the entire area encompassed by Monroe County and the cities as having equal distribution of winds. The risk of severe storms, tornadoes, water spouts and high winds in Layton does not vary from the rest of the planning area. All new buildings, replacement buildings, and additions to existing buildings must comply with the Florida Building Code's wind load requirements.

Rainfall/Ponding Flooding

Islamorada does not have any identified areas where rainfall/ponding flooding is so severe or prolonged as to cause access problems or damage to buildings.

Drought Hazards

Drought hazards for the planning area are described in Section 6.4. Islamorada's risk due to drought is comparable the drought risk throughout the area.

Wildland Fire Hazards

The Florida Forestry Department has not indicated that areas in Islamorada are likely to experience significant risk of wildland or brush fires.

Islamorada's Important and Critical Facilities

Table 11-3 lists the City's important facilities, some of which area shown in Figure 2-2.

Table 11-3. Important and Critical Facilities in Islamorada

Critical/Essential Facilities:	**Other Facilities:**
• Village of Islands Government Center (under design) • Monroe Sheriff's Sub-Station (Roth Building) • Founder's Park • Islamorada Fire- Rescue HQ Station #20/EOC • Islamorada Fire – Rescue Station #19 (under design) • Islamorada Fire – Rescue Station #21 (under design) • Coral Shores High School (County) • Plantation Key Elementary School (County) • Monroe County Gov./Courthouse	• U.S. Coast Guard Station • Plantation Key Convalescent Center • Florida Keys Electric Cooperative Sub-Station • Island Christian School • Florida Keys Children's Shelter • Comcast Cable • Bell South • Cingular Cell
Marinas: • Papa Joe's Marina • Bud N Mary's Marina • Max's Marine, Inc. • Caribee Boat Sales and Marina • Cobra Marine, Snake Creek • Coconut Cove Resort and Marina • Coral Bay Marina • FWC Marina • Holiday Isle Resorts and Marina	**Mobile Home and Recreational Vehicle Parks (as of October 1995):** • Coral Bay Trailer Court • Key Lantern Travel Trailer Park • Peaceful Palms Mobile Homes (Windley Key) • Windley Key Trailer Park • Airstream Road & Village Street (Plantation Key) Mobile Home Park • Sea Breeze Trailer Park (Plantation Key) • San Pedro Trailer Park (Plantation Key)

Table 11-3. Important and Critical Facilities in Islamorada

• Islamorada Boat Center • Islamorada Yacht Basin/Lorelei • La Siesta Marina • Matecumbe Yacht Club • Plantation Yacht Harbor Marina • Robbies Marina • Smuggler's Cove Marina • Whale Harbor Marina • World Wide Sportsmen Marina • Caloosa Cove Marina (Lower Matecumbe)	• Plantation Tropical Park (Plantation Key)
Hazardous Materials Sites (302 Facilities): • Bell South Telecommunications Facility • Monroe County Plantation Key Public Works • Plantation Key Colony Water Treatment Plant • Islamorada Founder's Park Water Treatment Plant	

11.4 Damage Reduction Activities

On-Going Activities

- Continue the inspection of enclosures below elevated lowest floors, as required by FEMA.
- Continue to identify and implement hazard mitigation projects for critical infrastructure.

Recent Projects

- Completed renovations to Islamorada Fire Station 20 which included an emergency operations center.
- Completed the Lower Matecumbe Stormwater Improvement Project which provided drainage infrastructure for flood mitigation and protection of a section of the island that experiences heavy flooding during mild storm events.
- Completed the Upper Matecumbe Stormwater Improvement Project which provided drainage infrastructure for flood mitigation and protection of a section of the island that experiences heavy flooding during mild storm events.

Planned or Under Way Projects

- Initiated the Plantation Key Colony Wastewater Treatment System project which will provide sewer infrastructure for proper waste treatment and disposal for water quality improvements and nearshore water protection.

- Lower Matecumbe Fire Station Project which will provide fire protection and life safety services where none exists currently.
- The Municipal Center project will provide a focal point for government services to include a new fire rescue facility.
- The Tollgate Shores Stormwater Improvement Project will provide drainage infrastructure for flood mitigation and protection for households in a section of the Lower Matecumbe Key island that experiences heavy flooding during mild storm events.
- To provide a new LIDAR Mapping of the Village to update the flood base and storm surge vulnerability information. This should be a countywide project in conjunction with FEMA's Map Modernization effort.
- To provide a study to mitigate the exposure and vulnerability of U.S. 1 located at Sea Oats Beach from the effects of a hurricane. This area will always be inundated by storm surge from any category hurricane and suffer significant damage resulting in segmentation of the Keys.
- To provide permanently installed emergency generators in two primary shelters, Coral Shores and Island Christian Schools.
- To provide a study to temporarily convert U.S. 1 into two northbound and one southbound lane during a hurricane evacuation from mile marker 80 to the 92.